

Title (en)
Optical function device

Title (de)
Vorrichtung mit einer optischen Funktion

Title (fr)
Dispositif ayant une fonction optique

Publication
EP 1039336 A3 20030102 (EN)

Application
EP 00302210 A 20000317

Priority
JP 11693499 A 19990320

Abstract (en)
[origin: EP1039336A2] The present invention provides an optical function device which is capable of inverting and amplifying an optical signal of the optical communication wavelength band, and executing operation of an image optical signal, and is operable in a wide temperature range, said optical function device composed of a light transmitting medium containing a rare earth element, comprising a portion thereof doped with 1×10^{23} per 1 m^3 or more of the rare earth element for inverting an optical signal and a portion thereof doped with 1×10^{21} per 1 m^3 or more of the rare earth element for amplifying the optical signal with an excitation light superposed thereto. <IMAGE>

IPC 1-7
G02F 3/02; **G02F 1/35**; **G02F 1/355**

IPC 8 full level
G02F 1/35 (2006.01); **G02F 3/00** (2006.01); **H01S 3/067** (2006.01); **H01S 3/16** (2006.01)

CPC (source: EP US)
G02F 1/3523 (2013.01 - EP US); **G02F 3/00** (2013.01 - EP US); **H01S 3/06754** (2013.01 - EP US); **H01S 3/1603** (2013.01 - EP US)

Citation (search report)
• [A] US 5406420 A 19950411 - MAEDA YOSHINOBU [JP]
• [A] US 5742072 A 19980421 - MAEDA YOSHINOBU [JP]
• [A] MAEDA Y ET AL: "NEGATIVE AMPLIFICATION OF OPTICAL SIGNAL DERIVED FROM NEGATIVE NONLINEAR ABSORPTION EFFECT IN ER-DOPED FIBERS", ELECTRONICS & COMMUNICATIONS IN JAPAN, PART II - ELECTRONICS, SCRIPTA TECHNICA. NEW YORK, US, vol. 80, no. 7, 1 July 1997 (1997-07-01), pages 8 - 17, XP000782945, ISSN: 8756-663X

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